ashtech

Post-Processing DLL for ArcPad® 10

Getting Started Guide

Prerequisites

Ashtech *Post-Processing DLL for ArcPad® 10* requires that you have ESRI's ArcPad 10 installed first on your MobileMapper 6, MobileMapper 10 or MobileMapper 100. Please refer to the ArcPad documentation for more information on how to install ArcPad 10.

Installing Post-Processing DLL for ArcPad® 10

The complete process for installing *Post-Processing DLL for ArcPad® 10* involves the following:

- Install Microsoft ActiveSync or Windows Mobile Device Center on your desktop PC.
- Establish a connection between the desktop PC and your receiver via ActiveSync.
- Insert the installation CD in your desktop PC. This automatically launches the setup.exe file from the CD.
- Click on the **Install Post-Processing DLL** option and follow the instructions to complete the installation. It is recommended to install *Post-Processing DLL for ArcPad® 10* in the same location as your GIS software (e.g. on the Device, and not on the Storage Card, if the GIS software has been installed on the Device).

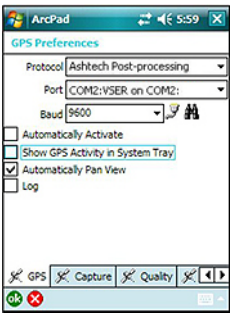
The first time you initiate the collection of raw data on your receiver, you will be asked to input the activation code found on a separate sheet. This sheet is part of the supply.

Operating Requirements

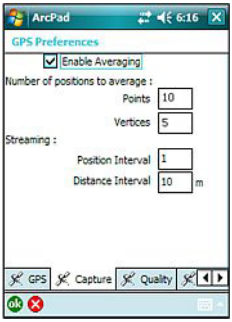
The DLL is designed in such a way that when you insert an SD card into your receiver, raw data will automatically be logged on the SD card. In the absence of an SD card, raw data will be logged in the *My Documents\GPS Raw Data* folder (MobileMapper 6 or MobileMapper 10) or in the *My Device\Storage Disk\GNSS Raw Data* folder (MobileMapper 100).

The instructions provided in this section refer to different icons whose meaning and representation are given in the table below.

Icon Name	Icon
GPS icon	
GPS Logger toolbar icon	
Start Logging GPS Raw Data button icon	
Stop Logging GPS Raw Data button icon	



1. Start ArcPad.
2. In the ArcPad tool bar, tap on the down arrow of the GPS icon and then select the **GPS Preferences** option. Make the following settings:
   - Protocol: Ashtech Post-processing
   - Port: COM1 (MobileMapper 6), COM3 (MobileMapper 10, or COM2 (MobileMapper 100)
   - Baud: Not a significant setting. Should be set to "9600".



Enable ArcPad averaging:

- Tap on the **Capture** tab and make the required settings (see screen opposite). Then tap **ok** to validate your settings and close the window.

  The post-processing DLL works with or without the averaging being enabled in ArcPad. The longer you stay static on a point or vertex, the more accurate the position you will get from the post-processing step.

  It is therefore recommended to enable the ArcPad averaging option and select at least 10 positions for point and vertex averaging. By doing this you will make sure that you actually stay at the point for at least 10 seconds.

Remember the point is created at the end of the averaging process so it is a good idea to stay on the point for about 10 seconds after the averaging screen is closed.

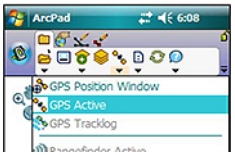
- Tap **ok** to validate the attributive settings and close the window.

  Following the recommendations below is the best way to secure good post-processing results:

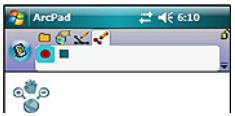
  a) During raw data collection, remember you should keep holding the receiver at an angle of 45° above the horizontal, even if you are not logging any feature but just moving from one feature to another.

  b) Never switch the receiver to suspend mode while collecting raw data (this would end raw data collection). If you want to save battery power while collecting data, you may turn off the screen backlight using the Backlight utility.

  c) Always collect raw data for at least 10 minutes, including for those projects where GIS feature collection can be completed in less time. Remember the more you collect raw data for a given project, the better the results of the post-processing.



3. Activate the GPS section:
   - In the ArcPad tool bar, tap on the down arrow of the GPS icon and select **GPS Active**.



4. In the ArcPad tool bar, tap on of the GPS Logger toolbar icon, and then on the Start Logging GPS Raw Data button icon.

5. Please refer to the ArcPad User Manual to collect point, line and polygon features.

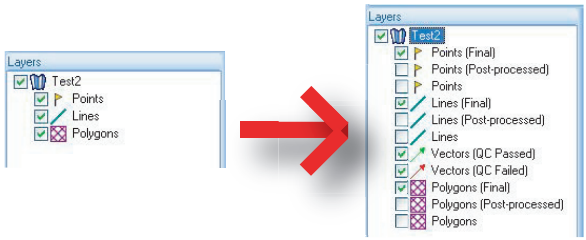
6. When enough data has been collected, do the following to stop data logging:
   - In the ArcPad tool bar, tap on of the GPS Logger toolbar icon, and then on the Stop Logging GPS Raw Data button icon.

Post-Processing Shapefiles & Raw Data in MobileMapper Office

- Copy the shapefiles and raw data to your desktop computer.
- Run MobileMapper Office on your computer.
- Click and select **Open**. Browse to the folder containing your field data files.
- Select one of those and click **Open**.
- Click on **Add Rover Raw Data**. Select the raw data file corresponding to the project (from the same folder as previously) and click **Open**. MobileMapper Office imports the file.
- Assuming you are working with a third-party reference station, click successively on **Add Reference Raw Data** then **From Web**. A new window then opens in which you have to indicate how you wish to search for the reference station you will use for post-processing your job.
- Choose one of the following two search criteria:
  - **Search up to x stations**: Specify a preset number of stations you want to list before choosing one. All the listed stations will be the closest to your working area, but there is no range limit for these stations.
  - **Search up to x km**: Specify a limit of distance between your working site and the stations. The shorter the distance, the better the raw data from the station, but the smaller the number of stations that can potentially be used.

- Click **Search**, then wait until the search is complete. At the end of the search, MobileMapper Office lists the stations meeting the search request.
- Select the most suitable reference station, mainly according to the distance (baseline) to that station.
- Click **Download**. MobileMapper Office imports the base raw data.

  NOTE: Ashtech does not guarantee 100% quality results when using raw data files from reference stations that are situated beyond 200 km (125 mi) from your working area.
- Click on **Start Processing**. MobileMapper Office post-processes the different files present in the project. Below is an example of what can be seen in the Layers pane at the end of the post-processing step:



For each layer (<Layer_name>) present in the project MobileMapper Office has created two extra layers:

- **<Layer_name> (Final)**: This layer is viewed by default. It shows all the features of the **<Layer_name>** layer, namely those that have just been post-processed, for which you can now see the refined positions on the map screen, and also those not impacted by the post-processing, whose positions are unchanged compared to what they are in the initial **<Layer_name>** layer.
- **<Layer_name> (Post-processed)**: This layer is not viewed by default. It only contains the features that were actually post-processed. You may choose to only view this layer if you wish to focus on the sole post-processed features.

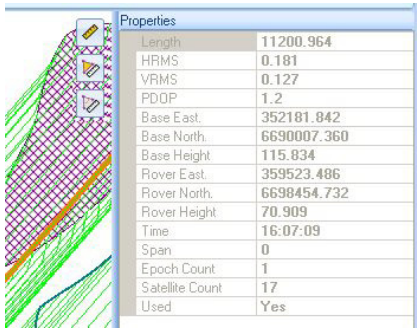
  (The “initial”<Layer_name> layer is also hidden by default.You may want to view this layer to see all the features as they were before the post-processing step.)

MobileMapper Office has also added two different vector layers to the project. Each vector describes the conditions in which the baseline between each post-processed point

and the base station used has been determined. The resulting components of the vector are also provided. The two vector layers are:

- **Vectors (QC Passed)** (in green): The vectors pertaining to that layer meet all the quality control parameters defined on the **Options** tab.
- **Vectors (QC Failed)** (in red): None of the vectors pertaining to that layer meets the quality control parameters defined on the **Options** tab. If the layer is empty (no red vectors), then that means all the points were post-processed successfully.

Each vector can be edited individually. Just select one on the map screen and the properties of the vector will then appear In the right-hand pane (see example below).



All new layers have been created –and can be found– in the same folder as those initially found in the project.

For more information on MobileMapper Office (quality control, Export function and other), refer to the corresponding manual (*MobileMapper Field & MobileMapper Office Getting Started Guide*).

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